

REMARKS

Claims 10 and 12 are pending in this application. By this Amendment, claims 10 and 12 are amended and claims 1-9 and 11 are canceled without prejudice to, or disclaimer of, the subject matter disclosed therein. Reconsideration of the application is respectfully requested.

The Office Action rejects claims 1, 2, 4-6 and 10-12 under 35 U.S.C. §102(e) over O'Keefe et al. (U.S. Patent Application Publication No. 2003/0098488); and claims 1-10 under 35 U.S.C. §103(a) over O'Keefe in view of Watanabe et al. (U.S. Patent Application Publication No. 2002/0024099). The rejections are respectfully traversed.

The cancellation of claims 1-9 and 11 renders their rejection moot. Moreover, none of the applied references, alone or in combination, disclose or suggest a method of driving an electronic apparatus having a carbon nanotube, a first electrode connected to one end of the carbon nanotube and a second electrode connected to the other end of the carbon nanotube, wherein the method includes causing the third electrode to output electromagnetic waves and varying a frequency of the electromagnetic waves to increase the conductance of the carbon nanotube, as recited in independent claim 10.

O'Keefe teaches a method to electronically modulate the energy gap and band structure of semiconducting carbon nanotubes (Abstract). More particularly, O'Keefe merely controls a voltage to change a band gap of a carbon nanotube that functions as a semiconductor, and to thereby control an amount of current flowing into the carbon nanotube. However, O'Keefe is silent as to the specific change in conductance of the carbon nanotube.

The Patent Office asserts that O'Keefe teaches the structure of the claimed invention and that the function of the structure, for example, changing the conductance, does not distinguish over O'Keefe. However, the claimed invention is a method, and O'Keefe does not teach the method step of increasing the conductance of the carbon nanotube, as recited in independent claim 10. Accordingly, regardless of any structural similarities between

O'Keefe's structure and the structure taught in the current invention, O'Keefe does not disclose or suggest the method step of varying a frequency of the electromagnetic waves to increase the conductance of the carbon nanotube. Accordingly, O'Keefe does not teach a method of driving an electrode apparatus that includes causing an electrode to output electromagnetic waves to increase a conductance of the carbon nanotube, as recited in independent claim 10.

Watanabe teaches a transistor of nanometer size that is capable of high speed operation and operates at room temperatures by using carbon nanotubes for semiconductor devices (Abstract). As such, Watanabe fails to cure the deficiencies in O'Keefe in disclosing or rendering obvious the features of independent claim 10.

Thus, independent claim 10, and its dependent claim 12, are patentable over the applied references. As such, withdrawal of the rejections of the claims under 35 U.S.C. §102(e) and 35 U.S.C. §103(a) is respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 10 and 12 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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